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# A Half-Century of Winter Bird Surveys at Lincoln and Scottsbluff, Nebraska\*

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Since 1900, the National Audubon Society has sponsored annual "Christmas bird counts" during the two-week period encompassing Christmas; and as a result, long-term data on winter bird populations have accumulated, especially for some locations. The first two such counts in Nebraska were made in 1909 and in 1912 in Lincoln. While similar counts were made in Omaha from 1909 to 1911, no further counts were conducted elsewhere in the state until the 1940's. Beginning in 1947 and continuing to the present, an unbroken series of counts were made in Lincoln, usually by members of the University Place Bird Club, the Audubon Naturalist's Club, or the Wachiska chapter of the National Audubon Society. Omaha counts were re-initiated in 1944 and, except for a gap from 1955-1961, have also continued to the present. The only other

long-term series of counts comes from Scottsbluff where an unbroken set of counts extends from 1949 to the present.

Few efforts have been made to summarize this great mass of potentially valuable information. In 1945, Leonard Wing offered a nation-wide summary of results for the first forty years of counts. Based on numbers of birds reported relative to observation time, his research indicated that the most common species nationally were the Red-winged Blackbird, American Crow, Common Grackle, Dark-eyed Junco, American Robin, American Tree Sparrow, European Starling, House Sparrow, Greater and Lesser Scaups, and Mallard. Based on the frequency of their occurrence in the total census sample for Lincoln, the most consistently reported species were the Downy Woodpecker, Song Sparrow, American Crow, Hairy Woodpecker, Dark-eyed Junco, White-breasted Nuthatch, Black-capped Chickadee, Blue Jay, American Tree Sparrow, and Golden-crowned Kinglet. Another nation-wide summary was made by Terry Root (1988), who analyzed data for the period 1963-72, and produced computer-generated maps showing the North American winter distributions of 253 species.

Because of the potential value of these counts in tracking Nebraska bird populations, I decided to analyze the data for the Lincoln and Scottsbluff areas. Early Christmas bird counts were generally not very thorough, and typically involved a few hours of effort by one or two people. Thus, the Lincoln counts for 1909 and 1911 were included in my analysis for their historic interest only. By the time the counts in Lincoln were re-initiated in the 1940's, strict guidelines had been established. Among these rules was the restriction in count area to a 15-mile diameter circle around a fixed point, which in Lincoln was initially established at the corner of A and 14th streets. In

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1971, the count center was moved west about three miles to the corner of West Coddington Avenue and A Street, probably to bring recently formed reservoirs such as Pawnee Lake and Conestoga Lake into the census area. Additionally, records on total "party hours" and total "party miles" had to be reported to adjust for the progressively increasing numbers of persons involved and the similarly increasing amount of travel by automobile. Similarly, the Scottsbluff counts were initially not very restricted in coverage. These counts included Lake Alice and Lake Minatare, which often support vast numbers of early winter Mallards. Later counts were centered in eastern Scottsbluff, and still later ones (beginning in 1988) were centered at Scotts Bluff National Monument, which would probably favor conifer-adapted species.

Although I initially intended to analyze only the Lincoln-area data, I soon realized that several interesting comparisons might be made if data from Scottsbluff were also included. Scottsbluff is 400 miles west of Lincoln, some 3,000 feet higher in elevation, and its native woodland vegetation is mainly influenced by the western coniferous forest rather than the eastern deciduous forest. Its winter average temperatures average about the same as Lincoln's, but its frost-free period averages about 40 days shorter.

Since 52 years of data were available from Lincoln starting in 1946, I decided to group results into 17 sets of years. These triads were in turn grouped in one ten-year period (1946 to 1955), four nine-year periods (1956–1991), plus a recent six-year period from 1991 to 1997. In Scottsbluff, the 48 years of data available to me were similarly divided into five nine-year periods beginning in 1949, plus a three-year period including 1994 through 1996. During that total period some changes in

species-level taxonomy have occurred. For example, the rufous-sided towhee has been "split" into two species, so records of these have been grouped simply as "towhee sp." The various forms of flickers, juncos, and other racial variants have been lumped as well. Furthermore, records of meadowlarks during winter in eastern Nebraska certainly include both eastern and western forms (but probably mostly westerns); these two nearly inseparable species have likewise been grouped together as "meadowlarks sp." for Lincoln-area counts; but the Scottsbluff counts are presumed to be entirely comprised of Western Meadowlarks. A few sightings of inadequately identified birds such as "falcon sp.," "duck sp.," and the like have been ignored. Rock Doves were evidently not included in the Christmas count summaries until the 1970's, but were present and fairly common in Lincoln when I arrived in 1961, and probably also then occurred in Scottsbluff.

Table 1 presents a listing of species ranked according to their relative consistency of occurrence in the Lincoln area over the entire 54-year period. Within each grouping the species are organized by diminishing occurrence; thus in the last grouping, the 17 species listed from American Bittern to Pine Grosbeak have been reported only once, whereas the Black-capped Chickadee, American Tree Sparrow, and Dark-eyed Junco are the only species that were observed on every year's count. Compared with Leonard Wing's list of highly-consistent species, those in both lists are the three just mentioned ones plus the Blue Jay, American Crow, Hairy Woodpecker, and Song Sparrow. Table 2 provides a similar listing for Scottsbluff, and the same table provides some comparative information for the two locations.

Tables 4 and 5 list all those species that were observed during at least five Lincoln and Scottsbluff counts respectively, and indicates the total number of individuals reported during each multi-year interval. To provide a basis for making between-year comparisons, the total average numbers of party hours and party miles for each of these intervals are also provided. Although it might seem logical that more consistency might occur when comparing party-hours than party-miles, a surprisingly low range of variation occurred with the latter comparison in both localities, suggesting that it might be the better normalizing statistic.

Although the cumulative numerical totals for the European Starling are shown for the Lincoln counts, the great year-to-year variation in their abundance (owing to the occasional presence of massive winter roosts during some counts) made it impractical to include these numbers without greatly affecting the relative numerical composition of all the other species. The same was true for the Mallard data from Scottsbluff.

Migrant birds other than Starlings that exhibited substantial year-to-year variability in winter abundance in the Lincoln area were the Horned Lark and the Lapland Longspur, both of which are known to be quite unpredictably common, depending on snow cover in the Great Plains. In Scottsbluff, there were similar large temporal variations in species such as the Pinyon Jay, Bohemian Waxwings, and the Western Meadowlark.

Species that remained consistently abundant in the Lincoln area throughout most or all of the entire period include the Red-tailed Hawk, Ring-necked Pheasant, Mourning Dove, Great Horned Owl, most woodpeckers, Blue Jay, American Crow, Black-capped Chickadee, White-breasted Nuthatch, Golden-crowned Kinglet, Cedar Waxwing, European Starling, Northern

Cardinal, American Tree Sparrow, Song Sparrow, Harris' Sparrow, Dark-eyed Junco, the Meadowlarks, American Goldfinch, and House Sparrow. These species mostly comprise Lincoln's basic early winter avifauna, although the Cedar Waxwing is likely to disappear during very cold periods. The species that have been consistently abundant in the Scottsbluff area include many of these same species, but excludes the Mourning Dove, Red-headed and Red-bellied Woodpeckers, Cedar Waxwing, and the Harris' Sparrow. The Black-billed Magpie and the Red-winged Blackbird, however, have been consistently abundant there.

Most of the strongly increasing species in the Lincoln area, including geese, ducks, gulls, and other water-related birds such as the Red-winged Blackbirds, reflect the increased amounts of surface water now present. European Starlings, Common Grackles, and Brown-headed Cowbirds, which mainly comprise the great flocks of migrating "blackbirds" that now annually descend on Lincoln, have learned to exploit the nearby grainfields and the relative warmth and safety of the city during winter months. American Crows have also increasingly adapted to city life. The recent explosion of House Finches in Lincoln illustrates the westward expansion of the species from the Atlantic Coast since the 1940's. This species and other seed-eaters such as Northern Cardinals have also no doubt benefitted from the great increase in bird-feeding activities by Lincolniters.

In Scottsbluff, some similar increasing trends have occurred, such as with the Canada Goose, American Wigeon, Wild Turkey, Blue Jay, American Crow, and House Finch. The Wild Turkey and Canada Goose have greatly benefitted by the Game and Parks Commission's introduction efforts, and the

Blue Jay and House Finch probably have gained in numbers through bird-feeding activities, as they have in Lincoln.

Species that have declined in the Lincoln area over the entire period include the Short-eared Owl, Tufted Titmouse, and perhaps the Red Crossbill and Evening Grosbeak. Short-eared Owls have declined nationally during the period between 1966 and 1993, whereas Tufted Titmice have increased (Price et al., 1995). Reduced numbers of crossbills and grosbeaks may reflect the ameliorating winters of recent decades.

Fewer species seem to have declined in the Scottsbluff area, but they certainly include the Northern Bobwhite, and possibly also the Brown Creeper and House Sparrow. The sample size of the Brown Creeper may also be too small to be significant, and the apparent House Sparrow variations are unconvincing. Nationally, House Sparrow populations declined considerably between 1966 and 1993, but Brown Creeper trends are unclear (Price et al., 1995). The Northern Bobwhite is near the western edge of its native range in western Nebraska and might thus be subject to irregular population changes. It too has declined nationally since 1966.

## References

- Price, J., Sam Droege, and A. Price. 1995. *The Summer Atlas of North American Birds*. New York: Academic Press.
- Root, T. 1987. *Atlas of Wintering North American Birds*. Chicago: U of Chicago P.
- Wing, L. 1945. "Christmas Birds: A Summary of Forty Years of Counting." *Audubon Magazine*. 43:380-1.

**Table 1**

*Relative Species Occurrence During Entire 53-Year Count Period ( 1909-1997) at Lincoln, Nebraska\*\**

- Recorded 50 or More Years:** American Tree Sparrow, Dark-eyed Junco, Blue Jay, American Crow, Common Flicker, Hairy Woodpecker, Downy Woodpecker, European Starling, Northern Cardinal, Song Sparrow, House Sparrow, American Goldfinch, Harris' Sparrow.
- Recorded 41-50 Years:** White-breasted Nuthatch, Red-tailed Hawk, Red-bellied Woodpecker, Great Horned Owl, Ring-necked Pheasant, American Kestrel, Mallard, Meadowlark spp., Northern Harrier, Mourning Dove.
- Recorded 31-40 Years:** Pine Siskin, Horned Lark, Cedar Waxwing, Belted Kingfisher, Purple Finch, Long-eared Owl, Common Grackle.
- Recorded 21-30 Years:** White-throated Sparrow, Towhee spp., Loggerhead Shrike, Rock Dove, White-crowned Sparrow, Yellow-bellied Sapsucker, Brown-headed Cowbird, Barred Owl.
- Recorded 11-20 Years:** Brown Thrasher, Tufted Titmouse, Cooper's Hawk, Red-headed Woodpecker, Brewer's Black-bird, Common Merganser, Common Snipe, Great Blue Heron, Winter Wren, Carolina Wren, Lapland Longspur, Short-eared Owl, Northern Shrike, Canada Goose, Swamp Sparrow, Rusty Blackbird, Townsend's Solitaire, Brown Thrasher, House Finch, Herring Gull.

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\*Arranged within groups in sequence of descending frequency.

**Recorded 5–10 Years:** Eastern Bluebird, Field Sparrow, Common Goldeneye, Red Crossbill, Ruby-crowned Kinglet, Evening Grosbeak, Wood Duck, Peregrine Falcon, Bohemian Waxwing, Black-billed Magpie, Lincoln's Sparrow, Northern Pintail, Lesser Scaup, American Coot.

**Recorded Fewer Than 5 Years:** Double-crested Cormorant, American Wigeon, Bufflehead, Northern Sawwhet Owl, Smith's Longspur, Greater White-fronted Goose, Wild Turkey, Northern Mockingbird, Fox Sparrow, Green-winged Teal, Redhead, Ring-necked Duck, Hooded Merganser, Ruddy Duck, Northern Goshawk, Yellow-rumped Warbler, Snow Bunting, White-winged Crossbill, American Bittern, Blue-winged Teal, Northern Shoveler, Canvasback, Osprey, Swainson's Hawk, Ferruginous Hawk, Parasitic Jaeger, Common Barn-owl, pygmy Nuthatch, Orange-crowned Warbler, Black-headed Grosbeak, Dickcissel, Chipping Sparrow, Savannah Sparrow, Great-tailed Grackle, Pine Grosbeak

**Table 2**

*Relative Frequency of Species, 1949–1996,  
Scottsbluff CBC*

**Observed 41 to 48 Years:** Mallard, Northern Harrier, American Kestrel, Ring-necked Pheasant, Belted Kingfisher, Downy Woodpecker, Northern Flicker, Horned Lark, Blue Jay, Black-billed Magpie, American Crow, Black-capped Chickadee, American Robin, Townsend's Solitaire, European Starling, American Tree Sparrow, Dark-eyed Junco, Red-winged Blackbird, Western Meadowlark, American Goldfinch, House Sparrow.

**Observed 31–40 Years:** Canada Goose, Red-tailed Hawk, Rough-legged Hawk, Great Horned Owl, Hairy Woodpecker, Northern Shrike, White-crowned Sparrow, House Finch, Pine Siskin.

**Observed 21–30 Years:** Northern Pintail, American Wigeon, Common Goldeneye, Common Merganser, Bald Eagle, Merlin, Northern Bobwhite, Killdeer, Common Snipe, Rock Dove, Red-breasted Nuthatch, Song Sparrow.

**Observed 11–20 Years:** Great Blue Heron, Green-winged Teal, Golden Eagle, Prairie Falcon, Wild Turkey, Mourning Dove, Pinyon Jay, Brown Creeper, Golden-crowned Kinglet, Harris' Sparrow, Evening Grosbeak.

**Observed 5–10 Years:** Snow Goose, Blue-winged Teal, Sharp-shinned Hawk, Swainson's Hawk, Ferruginous Hawk, Sharp-tailed Grouse, Eastern Screech Owl, Mountain Chickadee, Bohemian Waxwing, Cedar Waxwing, Brewer's Blackbird, Common Grackle, Common Redpoll.

**Observed Fewer Than 5 Years:** Western Grebe, Mute Swan, Black Duck, Gadwall, Cinnamon Teal, Northern Shoveler, European Wigeon, Canvasback, Ring-necked Duck, Lesser Scaup, Bufflehead, Turkey Vulture, Cooper's Hawk, Peregrine Falcon, Sharp-tailed Grouse, Chukar, Ring-billed Gull, Franklin's Gull, Herring Gull, American Coot, Sandhill Crane, Long-eared Owl, Red-headed Woodpecker, Lewis' Woodpecker, Yellow-bellied Sapsucker, Gray Jay, Steller's Jay, Tufted Titmouse, Pygmy Nuthatch, Loggerhead Shrike, Marsh Wren, Water Pipit, Northern Mockingbird, Orange-crowned Warbler, Yellow-rumped Warbler, Vesper Sparrow, Chipping Sparrow, Swamp Sparrow, Lark Sparrow, Savannah Sparrow, Field Sparrow, Fox Sparrow, Northern Oriole,

Yellow-headed Blackbird, Purple Finch, Cassin's Finch, White-winged Crossbill, Pine Grosbeak.

**Table 3**

*Comparison of Winter Bird Populations at Lincoln and Scottsbluff*

**Species Very Frequently Recorded (at least 40 years, or 80% of counts) at both Scottsbluff and Lincoln:** Mallard, Ring-necked Pheasant, Northern Harrier, Downy Woodpecker, Blue Jay, American Crow, Black-capped Chickadee, European Starling, Dark-eyed Junco, American Goldfinch, Meadowlark spp., House Sparrow.

**Species Regularly Recorded (over 40% of counts) at Scottsbluff, but Rare or Absent at Lincoln:** Black-billed Magpie, Townsend's Solitaire, Rough-legged Hawk, American Wigeon.

**Species Regularly Recorded (over 40% of counts) at Lincoln, but Rare or Absent at Scottsbluff:** Northern Cardinal, Purple Finch, Long-eared Owl, Barred Owl, Brown-headed Cowbird.

**Most Abundant Species in Lincoln-area Counts (Descending Overall Abundance):** European Starling, House Sparrow, American Tree Sparrow, Lapland Longspur, Dark-eyed Junco, Canada Goose, American Crow, Mallard, American Goldfinch, Horned Lark, Black-capped Chickadee, Red-winged Blackbird

**Most Abundant Species in Scottsbluff-area Counts (Descending Overall Abundance):** Mallard, Canada Goose, European Starling, Red-winged Blackbird, House Sparrow, Horned Lark, American Tree Sparrow, Dark-eyed Junco, American Robin, Black-billed Magpie, Rock Dove, American Goldfinch.

**Increasing Species:** Canada Goose (Both), Mallard (Lincoln), Bald Eagle (Both), American Kestrel (Lincoln), Ring-necked Pheasant (Lincoln), Wild Turkey (Scottsbluff), Mourning Dove (Lincoln), Blue Jay (Scottsbluff), American Crow (Both), Black-capped Chickadee (Lincoln), White-breasted Nuthatch (Lincoln), Red-winged Blackbird (Lincoln), Brown-headed Cowbird (Lincoln), House Finch (Both).

**Decreasing Species:** Bobwhite (Scottsbluff), Horned Lark (Lincoln), Tufted Titmouse (Lincoln), House Sparrow (Scottsbluff).

**Average Total Species:** Lincoln 45; Scottsbluff, 42.

**Average Birds per Party-mile:** Lincoln, 187; Scottsbluff, 182.

**Table 4**

*Wild Bird Surveys at Lincoln, Nebraska*

Inclusive Years (19__)	09,12	46-55	52-64	65-73	74-82	83-91	92-97	Total Birds	Freq.
Great Blue Heron		1			4	8	27	40	15
Snow Goose			1		2	1652	107	1762	12
Canada Goose				1	162	5269	17,661	23093	23
Wood Duck				2	3	5	3	13	7
Mallard		12	183	2696	1097	4242	4766	12996	44
Northern Pintail			2		3	2	11	18	5
Lesser Scaup				8		43	2	53	5
Common Goldeneye				12	2	187	137	338	9
Common Merganser				5		2213	73	2291	17
Bald Eagle						3	4	7	6
Northern Harrier		39	17	11	53	47	37	204	41
Sharp-shinned Hawk		6	11	10	17	35	30	109	36
Cooper's Hawk		7	3	1	7	6	5	29	19

Inclusive Years (19__)	09-12	46-55	52-64	65-73	74-82	83-91	92-97	Total Birds	Freq.
Ruby-crowned Kinglet		18	2	1	1	4	1	27	7
Eastern Bluebird				1	10	3	1	15	9
American Robin		949	220	377	174	754	508	2982	44
Townsend's Solitaire			8		7	2	1	18	11
Brown Thrasher		2	3	3	5	8	2	23	20
Bohemian Waxwing			5	1		3		9	5
Cedar Waxwing		155	194	385	429	692	242	2097	38
Northern Shrike		1			1	14	5	21	12
Loggerhead Shrike		4	7	9	12	13	5	50	29
European Starling		1544	5032	3977	142193	30642	15937		51
Northern Cardinal		409	489	408	995	1368	1019	4688	51
Towhee sp.		16	5	9	11	24	19	84	31
American Tree Sparrow	68	1461	3259	4103	15547	4669	4372	33479	53
Field Sparrow			1	2	1		5	9	9
Song Sparrow	5	245	121	79	185	161	137	933	51
Lincoln's Sparrow					8	15	1	24	5
Swamp Sparrow					23	1	1	25	11
White-throated Sparrow		2	5	12	54	103	64	240	29
White-crowned Sparrow		8	7	10	38	73	22	158	28
Harris' Sparrow		176	895	1863	2622	1699	646	7901	51
Dark-eyed Junco	36	2056	3079	2743	4559	8323	4752	25548	53
Lapland Longspur		28	2000	852	23555		67	26502	13
Red-winged Blackbird		56	230	239	1350	3707	2792	8374	38
Meadowlark sp.	5	52	851	1566	1672	678	727	5551	44
Brewer's Blackbird		118	1	9	39	300	1	468	17
Rusty Blackbird			8	75	96	19	17	215	11
Common Grackle		2	28	116	40	196	62	444	31
Brown-headed Cowbird		1	54	178	455	553	41	1282	24
Purple Finch		22	58	111	200	118	41	550	32
House Finch					15	139	743	897	10
Red Crossbill		130	278	77	11	12		508	14
Common Redpoll		5		123	16	4		148	8
Pine Siskin		19	584	207	269	402	346	1827	40
American Goldfinch		505	1100	954	2947	2640	1908	10054	51
Evening Grosbeak		1	13	3	3	2		22	7
House Sparrow		2723	11158	19372	29038	21975	6807	91074	51

Inclusive Years (19__)	09-12	46-55	52-64	65-73	74-82	83-91	92-97	Total Birds	Freq.
Red-tailed Hawk		37	46	100	205	420	398	1206	49
Rough-legged Hawk		10	6	8	24	15	11	74	35
American Kestrel		37	61	49	110	205	149	611	46
Merlin		3			6	4	4	17	14
Peregrine Falcon		2			1	3	1	7	7
Ring-necked Pheasant		22	49	96	309	447	205	1128	47
Northern Bobwhite		3	4	112	254	107	186	666	30
American Coot				6	1	2		9	5
Killdeer			3	4	2	15	2	26	12
Common Snipe			6	3	13	3	21	46	16
Ring-billed Gull				2	8	414	585	1009	14
Herring Gull					5	86	57	148	10
Rock Dove	Not	Included in	Early	Counts	1480	2371	2926	6777	24
Mourning Dove		25	382	979	1229	799	1056	4470	41
Eastern Screech-owl				14	211	122	47	394	26
Great Horned Owl		50	38	42	139	190	100	559	48
Barred Owl				1	24	25	18	68	22
Long-eared Owl		47	14	1	111	87	40	300	31
Short-eared Owl		6	2	5	6	1		20	34
Belted Kingfisher		3	4	7	44	66	40	164	34
Red-headed Woodpecker			2		56	20	12	90	19
Red-bellied Woodpecker		41	63	49	156	195	145	649	48
Yellow-bellied Sapsucker			14	4	11	9	9	47	27
Downy Woodpecker	11	248	207	168	474	724	513	2345	51
Hairy Woodpecker	1	64	39	39	158	146	96	543	51
Northern Flicker	1	141	128	90	302	298	160	1120	52
Horned Lark	95	76	613	969	5459	203	1870	9285	38
Blue Jay	2	85	311	626	1497	2653	1948	7122	51
Black-billed Magpie						3	15	18	5
American Crow	20	1589	2899	1025	2072	4062	5075	16742	52
Tufted Titmouse		51	40	9	5	1		106	20
Black-capped Chickadee	21	845	838	492	2031	3312	1628	9167	53
Red-breasted Nuthatch		68	62	29	86	84	146	475	43
White-breasted Nuthatch	5	60	356	102	380	670	368	1941	49
Brown Creeper	6	139	156	39	119	215	150	824	51
Carolina Wren		1				12	10	23	13
Winter Wren		2			5	6	4	17	14
Golden-crowned Kinglet		86	226	76	174	427	199	1188	46



TOTAL BIRDS *	276	12970	31449	41780	102906	80808	66412	336606	
Average Total Birds/ Year*	138	1613	4053	4642	27290	12383	13725	10630	
Average Total Species	9	30.6	45.5	44.1	59.6	63.8	66.6	45.2	
Average Total Observers	2	10.3	12.8	12.5	24.7	42.1	32.8	19.5	
Average Party Hours	5	26.7	22.5	32.7	80.1	92.6	110	52.7	
Average Party Miles	7	64	152	218	467	448	521	312	
Average Birds/Party Mile	7	25	27	21	58	27	26	34	
*Excluding Starling									

Table 5

*Winter Bird Surveys at Scottsbluff, Nebraska*

Inclusive Years (19...)	49-57	58-66	67-75	76-84	85-93	94-96	Total Birds	Freq.
Great Blue Heron		1		7	16	6	29	13
Snow Goose				5	1	31	37	5
Canada Goose	8	312	902	1791	2558	3228	60819	35
Green-winged Teal	6	132	43	24	109	11	325	16
Mallard	45016	245779	388153	6000	3485	19989		48
Northern Pintail	8	15	64	19	90	10	206	24
Blue-winged Teal			30	8	6		57	5
American Wigeon		5	51	67	480	127	730	21
Common Goldeneye	10	40	75	9	63	145	342	28
Common Merganser	27	184	461	4	7		683	25
Bald Eagle		9	30	13	64	16	132	27
Northern Harrier	27	46	35	13	54	9	176	42
Sharp-shinned Hawk				1	5	1	7	5
Red-tailed Hawk		6	17	20	23	17	31	31
Swinson's Hawk			4	2		2	8	5
Ferruginous Hawk				2	2	4	8	6
Rough-legged Hawk	11	17	17	19	20	8	92	32
Golden Eagle	3	6	17	1	10	6	43	17
American Kestrel	14	38	38	81	89	40	300	42
Merlin	1	5	5	15	6	1	33	22
Prairie Falcon		1	3	7	7		18	12
Ring-necked Pheasant	46	118	43	86	83	10	386	47
Northern Bobwhite	106	176	75	47	29	11	444	21
Wild Turkey		23	19	28	274	165	532	16
Killdeer	25	21	4	48	3	1	89	24

Inclusive Years (19...)	49-57	58-66	67-75	76-84	85-93	94-96	Total Birds	Freq.
Common Snipe	17	21	17	8	9	9	81	26
Rock Dove	Not	Counted	163	963	938	183	2247	24
Mourning Dove	7	77	21	13	2		120	16
Eastern Screech-owl		3	3	1	1		8	9
Great Horned Owl	5	30	20	21	16	10	102	38
Belted Kingfisher	9	14	17	15	17	6	102	41
Downy Woodpecker	79	66	68	71	52	1	346	46
Hairy Woodpecker	22	24	12	12	8	8	79	36
Northern Flicker	152	223	241	309	215	88	1228	48
Horned Lark	374	1365	2657	1008	4310	152	9866	46
Blue Jay	24	50	115	169	417	120	795	44
Black-billed Magpie	484	681	350	360	454	141	2470	48
American Crow	28	87	89	422	624	220	1470	41
Pinyon Jay	55	70	391	453	11	12	1022	44
Black-capped Chickadee	372	317	270	331	318	113	1423	47
Mountain Chickadee			7	5		10	22	5
Red-breasted Nuthatch	15	20	6	9	14	20	79	30
White-breasted Nuthatch	2	10	3	2	4		21	11
Brown Creeper	10	9	1	5	1	1	27	16
Golden-crowned Kinglet	2	3	3	5	15		28	14
American Robin	696	386	608	1302	220	516	3728	47
Townsend's Solitaire	38	62	44	31	52	67	294	42
Bohemian Waxwing		575	146	31	52	14	818	8
Cedar Waxwing	38		174	30	2		206	10
Northern Shrike	10	26	20	25	25	14	120	39
European Starling	1880	14127	14212	10227	9708	7973	48927	48
American Tree Sparrow	791	1549	941	923	579	242	5025	47
Song Sparrow	12	20	12	8	18	16	86	28
White-crowned Sparrow	131	365	61	85	242	18	902	40
Harris' Sparrow		3	29	32	4		68	14
Dark-eyed Junco	923	1087	647	739	1079	250	4725	47
Red-winged Blackbird	2636	14500	5531	2238	12888	2600	40393	43
Western Meadowlark	321	828	592	164	272	19	2196	43
Brewer's Blackbird	10	23	31				64	6
Common Grackle				8	53	3	65	6
House Finch	24	156	301	676	827	201	1791	39
Common Redpoll	42	16		60			118	5
Pine Siskin	207	305	253	362	426	453	2006	39

Paul A. Johnsgard

Inclusive Years (19__)	49-57	58-66	67-75	76-84	85-93	94-96	Total Birds	Freq.
American Goldfinch	448	266	342	499	413	238	2206	45
Evening Grosbeak	10	139	9	48	3	136	345	12
House Sparrow	3201	13505	8617	7438	4659	1374	38794	48
Average Total Birds*	13367	52163	38957	31425	65947	48069	33212	
Average Total Birds/Year*	1485	5907	4328	3492	7327	16023	6427	
Average Total Species	28	43	42	43	45	50	45	
Average Total Party Hours	22	30	29	29	20	17	24	
Average Total Party Miles	93	192	206	237	187	176	182	
Average Birds/Party Mile	43	21	19	15	39	91	35	
*Excluding Mallard								